GOLIK, A.Z. [Holyk, O.Z.]; SHIMANSKIY, Yu.I. [Shymans'kyi, IU.I.]; KOBIYCHUK, N.M. [Kobiichuk, N.M.]

Compressibility of isoviscous substances [with summary in English]. Ukr.fiz.zhur. 3 no.4:537-541 Jl-Ag '58. (MIRA 11:12)

1. Kiyevskiy gosudarstvennyy universitet.
(Compressibility)

GOLIK, A.Z.; MOCHARNYUK, R.F.

Physical properties and structure of normal alcohol solutions in acetone. Ukr. khim. zhur. 24 no.1:29-32 '58. (MIRA 11:4)

1.Kiyevskiy gosudarstvennyy universitet im. T.G. Shevchenko.
(Alcohols) (Acetone) (Solution (Chemistry))

KOTORLENKO, L.A.; GOLIK, A.Z.; KOVNERISTAYA, A.S.

Viscosity and electric conductivity of lithium chloride solutions in alcohols. Ukr.khim.zhur. 24 no.5:618-625 '58. (MIRA 12:1)

1. Kiyevskiy gosudarstvennyy universitet imeni T.G. Shevchenko.
(Lithium chloride) (Solution (Chemistry))

GOLIK, A.Z.; SOLOMKO, V.P.

Investigation of the physical properties of the water - acetone - alcohol system. Part 1: Water - acetone-ethanol system. Ukr.khim.zhur. 24 no.6:734-740 '58. (MIRA 12:3)

1. Kiyevskiy gosudarstvennyy universitet im. T.G. Shevchenko.
(Acetone) (Ethyl alcohol) (Systems (Chemistry))

GOLIK, A.Z. [Holyk, O.Z.

Viscosity and electrical conductivity of zinc and cadmium amalgams. Part 2. Ukr.fiz.zhur. 4 no.4:491-496 Jl-Ag '59. (MIRA 13:4)

1. Kiyevskiy gosudarstvennyy universitet im. T.G. Shevchenko.
(Amalgams) (Zinc) (Cadmium)

GOLIK, A.Z. [Holyk, O.Z.]; SHIMANSKAYA, Ye.T. [Shymans'ka, O.T.]

Investigation of the critical state of substances by Loepler's method. Part 2. Temperature dependence of the density of hexane near the critical point. Ukr.fiz.zhur. 4 no.6:769-788 N-D '59. (MIRA 14:10)

1. Kiyevskiy gosudarstvennyy universitet im. T.G.Shevchenko.
(Hexane--Thermal properties)

GOLIK, A.Z.; SOLOMKO, V.P.

Investigation of the physical properties of the system water-acetone-alcohols. Part 2: System water-acetone-butanol. Ukr. khim.zhur. 25 no.1:40-44 '59. (MIRA 12:4)

1. Kiyevskiy gosudarstvennyy universitet im. T.G. Shevchenko.
(Water) (Acetone) (Butyl alcohol)

PHASE I BOOK EXPLOITATION SOV/5469

Soveshchaniye po kriticheskim yavleniyam i flyuktuatsiyam v rastvorakh. Moscow, 1960.

Kriticheskiye yavleniya i flyuktuatsii v rastvorakh; trudy [illegible], yanvar' 1960 g. (Critical Phenomena and Fluctuations in Solutions; Transactions of the Conference, January 1960) Moscow, Izd-vo AN SSSR, 1960. 190 p. 2,500 copies printed.

Sponsoring Agencies: Akademiya nauk SSSR. Otdeleniye khimicheskikh nauk. Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova. Khimicheskiy fakul'tet.

Responsible Ed.: M. I. Shakhparonov, Doctor of Chemical Sciences, Professor; Ed. of Publishing House: E. S. Dragunov; Tech. Ed.: S. G. Tikhomirova.

PURPOSE: This collection of articles is intended for scientific personnel concerned with chemistry, physics, and heat power engineering.

Card 1/9

Critical Phenomena and Fluctuations SOV/5-5

COVERAGE: The book consists of the 55 reports presented at the Conference on Critical Phenomena and Fluctuations in Fluids organized by the Chemical Institute of Moscow State University, January 26-28, 1960. The papers contain results of investigations carried out in recent years by Soviet physicists, chemists, and heat physicists. The Organizing Committee of the Conference was composed of Professor Kh. I. Amirkhanov, A. A. Galik, V. N. Kolechevskiy (Chairman), V. K. Semenchenko, A. V. Storonkin, I. Z. Fisher, and M. I. Shakhparonov (Deputy Chairman). References accompany individual articles.

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Lebedev, N. V., and Ya. [illegible] [Kafedra eksperimental'noy fiziki, Dnepropetrovskiy gosudarstvennyy universitet -- Depart-

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Critical Phenomena and Fluctuations SOV/5459

[illegible] of Experimental Physics, [illegible] State University]. [illegible] of Fluids Flucu[illegible] Near and [illegible] Method of X-Ray Scattering [illegible] 81

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Critical Phenomena and Fluctuations SOV/5469

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Shakhparonov, Ye. T., Yu. I. Shakhparonov, and A. Z. Gazizov (Laboratory of Molecular Physics, Division of Physics, Kazan State University imeni V. I. Ulyanov-Lenin). Investigation of the Critical State of Pure Substances by Taylor's Method 171

Resolution of the Conference on Critical Phenomena and Fluctuations in Solutions 189

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S/185/60/005/002/012/022
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15.8500

AUTHORS: Golyk, O.Z. and Cholpan, P.P.

TITLE: Molecular structure, compressibility, surface tension and viscosity of certain polysiloxanes

PERIODICAL: Ukrayins'kyy fizychnyy zhurnal, v. 5, no. 2, 1960, 242-250

TEXT: Polymethyl- and polyethylsiloxanes with linear molecules are experimentally studied, this article being a continuation of one of the authors previous works: O.Z. Golyk (Ref. 2: UkhZh, 23, no. 2, 139, 1957, and 2 articles in collaboration with others). From intensity curves of X-ray scattering, electron-density curves were constructed; these were used for determining the valence angles, the length of the chemical bond, and the packing of the molecules in the liquid state. The intensity curves, plotted on figures, show that polymethyl- and polyethylsiloxanes with linear molecules have a similar structure in the liquid state. The density, surface tension, compressibility and viscosity of these substances were

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Molecular structure...

investigated for a wide temperature range; figures and tables are given with the results of these investigations For polymethylsiloxanes, the polytherms of surface tension and of viscosity are the higher, and those of compressibility - the lower, the higher the potential of intermolecular forces, and the higher the critical temperature of the substance. The surface tension is also in direct proportion with the size of the molecules. Adiabatic compressibility of polymethylsiloxanes was studied by means of an ultra-acoustic interferometer. The temperature dependence of viscosity follows an exponential law. The polytherms of surface tension and of viscosity in the case of polyethylsiloxanes, are also the higher, the higher the potential of intermolecular forces and the higher the critical temperature. The activation energy too, is in direct proportion with intermolecular potential and critical temperature. The viscosity of binary solutions of polymethylsiloxanes was also studied, and isoviscous substances were obtained: both the activation energy and also compressibility of the isoviscous substances is practically the same. This study gives additional proof of the correspondence between structure and intermolecular forces on the

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Molecular structure...

one hand, and surface tension, compressibility, and viscosity on the other. There are 9 figures, 4 tables and 3 references: 2 Soviet-bloc and 1 non-Soviet-bloc. The reference to the English-language publication reads as follows: H.S. Green, The molecular theory of fluids, Amsterdam, 1952; I.J. Kirkwood a. F.P. Buff, J. Chem. Phys., 17, 338, 1949; I.J. Kirkwood, F. P. Buff, H.S. Green, J. Chem. Phys., 17, 998, 1949.

ASSOCIATION: Kyyvs'kogo ordena Lenina universytetu im. T.G. Shevchenka (Kiyev Order of Lenin University im. T.G. Shevchenko), Department of Molecular Physics

SUBMITTED: October 1, 1959

Card 3/3

GOLIK, A.Z. [Holyk, O.Z.]; CHOLPAN, P.F. [Cholpan, P.P.]

Molecular structure and physical properties of some polysiloxanes. Part 2: Structure and physical properties of isoviscous polysiloxanes. Ukr. fiz. zhur. 5 no.6:843-849 N-D '60. (MIRA 14:3)

1. Kiyevskiy ordena Lenina gosudarstvennyy universitet im. T.G. Shevchenko.

(Siloxanes)

GOLIK, A.Z. [Holyk, O.Z.]; CHOLPAN, P.F. [Cholpan, P.P.]

Molecular structure and physical properties of some polysiloxanes. Part 3: Viscosity, compressibility, and structure of liquid cyclic polysiloxanes. Ukr. fiz. zhur. 5 no.6:850-856 N-D '60. (MIRA 14:3)

1. Kiyevskiy ordena Lenina gosudarstvennyy universitet im. T. G. Shevchenko.

(Siloxanes)

SKRYSHEVSKIY, Anton Frantsevich; GOLIK, A.Z., prof., otv. red.; DROZHZHIN, E.V., red.; OKOINAYA, Ye.D., tekhn. red.

[Diffraction of X rays, electrons, and neutrons in gases and the molecular structure]Difraktsiia rentgenovskikh lucheĭ, elektronov i neitronov v gazakh i stroenie molekul. Kiev, Izd-vo Kievskogo univ., 1961. 84 p. (MIRA 15:9)
(X rays--Diffraction) (Electron diffraction examination)
(Neutrons--Diffraction)

GOLIK, A.Z.; CHOLPAN, P.F.

Speed of ultrasound in some polysiloxanes. Akust.zhur. 7 no.1:33-39 '61. (MIRA 14:4)

1. Kiyevskiy gosudarstvennyy universitet.
(Siloxanes)
(Ultrasonic waves)

S/081/6[illegible]/000/021/010/094
E032/E158

AUTHORS: Shimanskaya Ye. T., Shimanskiy [illegible] I., Golik, A. Z.

TITLE: Investigation of the critical state of pure substances by Tepler's method

PERIODICAL: Referativnyy zhurnal. Khimiya no. 21 1961, 43, abstract 21B347 (Sb. "Kritich. yavleniya i flyuktuatsii v rastvorakh", M., AN SSSR, 1960 171 188)

TEXT: A method has been developed for the investigation of critical states, by means of which the density ρ of a substance can be measured in any point in a chamber (by the optical Tepler method) with long-time thermostating. The apparatus is described in detail. Heptane and hexane were examined. Density has a non-monotonic gradient with respect to the chamber height Z and has a maximum at the meniscus. This maximum increases as the temperature approaches the point T_m at which the meniscus vanishes. With a steady temperature change rate, 1 deg/hr, the dρ/dZ maximum is present on heating and absent on cooling (i.e. a hysteresis is observed). With irregular changes in temperature and long-time

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(15 - 20 kcal thermostating), the dQ/dZ maximum is however present on heating as well as cooling; the maxima are then lower than in the case of steady heating. The dQ/dZ curves are found by integrating $dQ/dZ = f(Z)$. For $T > T_m$ they are S shaped. In the lower part of the chamber density is higher, and in the upper part lower than critical. This is in full agreement with classical representations regarding the existence of a critical point and not a region when allowing for the effect of gravitational field. The critical state is realized only in a narrow layer at the point where the meniscus vanishes. Above and below this layer the substance is not in a critical state although its temperature is critical. As the density differences throughout the chamber corresponds at the critical temperature to the equilibrium state then it must be assumed that displacement sometimes occurs, levelling the density and removing the system from the state of equilibrium. [Abstracter's note: Complete translation.]

GOLIK, A.Z.; BORKOVSKIY, V.Ye.

Heat of vaporization, composition of vapors, and surface tension of solutions of paraffins and alcohols. Ukr.khim.zhur. 27 no.5: 574-577 '61. (MIRA 14:9)

1. Kiyevskiy gosudarstvennyy universitet im. T.G. Shevchenko.
(Paraffins) (Alcohols)

BOLIK, A.K.; BARANOVSKIY, V.Ye.

Latent heat of vaporization of alcohols in acetone solutions. Ukr.khim.zhur. 27 no.5:577-580 '61. (MIRA 14:9)

1. Kiyevskiy gosudarstvennyy universitet im. T.G. Shevchenko.
(Alcohols) (Heat of vaporization)

15 8170

S/073/6[illegible]/[illegible]/[illegible]/[illegible]
B110/B117

AUTHORS: Golik, A. Z., Cholpan, P. F., Ivanova, L. I.

TITLE: Investigation of some physical properties of [illegible] phenyl siloxanes

PERIODICAL: Ukrainskiy khimicheskiy zhurnal, v. [illegible], [illegible], 754 - 759

TEXT: This work is an investigation of viscosity, surface speed, and adiabatic compressibility of 1,5-dimethylphenyl-3-methylphenyltrisiloxane $(CH_3)_2C_6H_5SiOSi(C_6H_5CH_3)OSiC_6H_5(CH_3)_2$; 1,5-trimethyl-3-methylphenyltrisiloxane $(CH_3)_3SiOSi(C_6H_5CH_3)OSi(CH_3)_3$; 1,7-trimethyl-3-methylphenyltetrasiloxane $(CH_3)_3Si\left[OSiCH_3C_6H_5\right]_2OSi(CH_3)_3$; polymer 1 (P1) $(CH_3)_3Si\left[OSiCH_3C_6H_5\right]_{18}OSi(CH_3)_3$; polymer 2 (P2) $(CH_3)_3Si\left[OSiCH_3C_6H_5\right]_{[illegible]}\left[OSi(CH_3)_2\right]_{[illegible]}OSi(CH_3)_3$; polymer 3 (P3) $(CH_3)_3Si\left[OSi(C_6H_5)_2\right]_{[illegible]}\left[OSiCH_3C_6H_5\right]_{[illegible]}$;

Card 1/[illegible]

S/081/61/[illegible]
B11/B1[illegible]

Investigation of some physical...

-OSi(CH$_3$)$_3$ polymer 1 (P4) (CH$_3$)$_3$Si[OSi(CH$_3$)$_2$]$_{11}$OSi(CH$_3$)$_3$ [illegible]

structure of the polymethyl phenyl siloxanes was [illegible]
and their molecular weight was determined. The [illegible]
ity with temperature according to the [illegible]
polytherms of the viscosities of P. and P[illegible] [illegible]
Only the first three substances correspond to the [illegible]

$\eta = C/(V \cdot \omega)$ (Table 1) Between 20 and [illegible] C, [illegible]
increasing temperature. Ultrasonic speed was me[illegible]
interferometer by I. G. Mikhailov [illegible]
calculated according to the formula [illegible]
length of ultrasonic waves, [illegible] generator [illegible]
the trimer with 4 C$_6$H$_5$ groups (A), of the [illegible]

of the methyl trimer (C) and of the [illegible] (D)
tetramer with two C$_6$H$_5$ groups [illegible]

tures with the polytherm of A [illegible]

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30870

S/073/61/027/006/002/005

Investigation of some physical... B110/B147

polytherm of D lies above that of E. In P1, P2, and P3, a slight deviation from linearity was found at 40°C (near their solidification point). Adiabatic compressibility was calculated by; $\beta = 1/a^2\rho$ (a = ultrasonic speed, ρ = density, β = adiabatic compressibility. It is inversely proportional to the number of phenyl radicals. From the linear dependence; $\ln \beta = f(t)$, $\beta = \beta_0 \exp(T/C)$ is derived; T = experimental temperature, β_0 = adiabatic compressibility at T = 0, C = constant (Table 2). There are 10 figures, 2 tables, and 3 Soviet references.

ASSOCIATION: Kiyevskiy gosudarstvennyy universitet im. T. G. Shevchenko (Kiyev State University imeni T. G. Shevchenko)

SUBMITTED: September 29, 1960

Card 3/5

GOLIK, A.Z.; KLASSEN, I.F.; KUCHAK, G.M.

Speed of propagation of ultrasonic waves in certain zinc and cadmium amalgams. Akust.zhur. 7 no.2:258-260 '61. (MIRA 14:7)

1. Kiyevskiy gosudarstvennyy universitet.
(Ultrasonic waves--Speed) (Zinc amalgam)
(Cadmium amalgam)

GOLIK, A.Z., prof., otv. red.; ROSHCHINA, G.P., dots., otv. red.; MIRONETS, Ye.M., red.; KHOKHANOVSKAYA, T.I., tekhn. red.

[Structure and physical properties of matter in the liquid state; materials. Stroenie i fizicheskie svoistva veshchestva v zhidkom sostoianii; materialy. Kiev, Izd-vo Kievskogo univ., 1962. 146 p. (MIRA 15:9)

1. Soveshchaniye posvyashchennoye problema zhidkogo sostoyaniya veshchestva. 4th, Kiev, 1959.

(Liquids)

GOLIK, A.Z.

STRUCTURE AND PHYSICAL PROPERTIES OF MATTER IN A LIQUID STATE
reports read at the 4th Conference convened in KIYEV from 1 to 5 June 1959, published by the Publishing House of KIYEV University, KIYEV, USSR, 1962

GOLIK, A.Z.

STRUCTURE AND PHYSICAL PROPERTIES OF MATTER IN A LIQUID STATE
reports read at the 4th Conference convened in KIYEV from 1 to 5 June 1959, published by the Publishing House of KIYEV University, KIYEV, USSR, 1962

ROSHCHINA, Galina Petrovna; [illegible] prof., otv. red.; [illegible], V.I., red.; [illegible], tekhn. red.

[Molecular scattering of light in gases] Molekuliarnoe rasseianie sveta v gazakh. Kiev, Izd-vo Kiev. gos. univ., [illegible], 27 p. (MIRA 15:11)

(Raman effect) (Scattering (Physics)) (Light--Scattering)

GOLIK, A.Z., prof., otv. red.; ..OSHCHINA, G.F., dots., otv. red.; MIRONETS, Ye.M., red.; KHOKHANOVSKAYA, T.I., tekhn.red.

[Structure and physical properties of matter in the liquid state; materials]Stroenie i fizicheskie svoistva veshchestva v zhidkom sostoianii; materialy. Kiev, Izd-vo Kievskogo univ., 1962. 146 p. (MIRA 15:9)

1. Soveshchaniye posvyashchennoye probleme zhidkogo sostoyaniya veshchestva. 4th, Kiev, 1959.

(Liquids)

S/843/62/000/000/006/010
D207/D308

AUTHOR: Golik, A.A. and Klassen, I.F.

TITLE: Relationship of the viscosity and electrical conductivity with the structure of zinc and cadmium amalgams

SOURCE: Stroyeniye i fizicheskiye svoystva veshchestva v zhidkom sostoyanii; materialy IV soveshch. po probl. zhidkogo sost. veshchestva, v Kiyeve 1959 g. Kiev, Izd-vo Kiev. univ., 1962, 96-100

TEXT: The purpose of this work was to check the hypothesis that both the first (shear) viscosity and the electrical conductivity of liquid metals and their solutions are related to the short-range order. The viscosity, density and electrical conductivity of zinc and cadmium amalgams were measured at temperatures up to 350°C in a wide range of compositions. Amalgams with the same viscosity had the same short-range order but different electrical conductivities. Amalgams with the same electrical conductivity had practically the

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Relationship of the viscosity ... S/845/62/000/000/006/010
D207/D308

same density but different viscosities. The results confirm the hypothesis cited above. There are 4 figures and 1 table.

ASSOCIATION: Kiyevskiy gosudarstvennyy universitet (Kiev State University)

Card 2/2

GOLIK, A.Z.; RYNDICH, N.A.; KUCHINKA, M.Yu.; ANDRIYENKO, S.S.

Thermomechanical properties of cord made from polycaprolactam.
Khim.volok. no.2:23-25 '62. (MIRA 15:4)

1. Kiyevskiy gosudarstvennyy universitet im. Shevchenko.
(Textile fibers, Synthetic) (Azepinone)

GOLIK, A.Z., [Holyk, O.Z.]; CHOLPAN, P.F. [Cholpan, P.P.]

Molecular structure and physical properties of certain siloxanes. Part 4. Density of two-component solutions of liquid siloxanes. Ukr.fiz.zhur. 7 no.5:549-553 My '62. (MIRA 16:1)

1. Kiyevskiy gosudarstvennyy universitet im. Shevchenko.
(Siloxanes)

GOLIK, A.Z. [Holyk, O.Z.]; CHOLPAN, P.F. [Cholpan, P.P.]

Molecular structure and physical properties of certain siloxanes. Part 5. Surface tension and molecular interaction of liquid siloxanes. Ukr.fiz.zhur. 7 no.5:554-558 My '62. (MIRA 16:1)

1. Kiyevskiy gosudarstvennyy universitet im. Shevchenko.
(Siloxanes)

GOLIK, A.Z. [Holyk, O.Z.]; CHOLPAN, P.F. [Cholpan, P.P.]

Density and short-range coordination of certain liquids. Ukr. fiz.zhur. 7 no.5:559-562 My '62. (MIRA 16:1)

1. Kiyevskiy gosudarstvennyy universitet im. Shevchenko.
(Liquids)

GOLIK, A.Z.

Present stage and problems of the physics of liquids. Ukr.fiz. zhur. 7 no.7:685-686 Jl '62. (MIRA 15:12)
(Liquids)

S/185/62/007/008/001/008
D234/D308

AUTHOR: Golik, A.Z.

TITLE: Connection of compressibility and sheer viscosity with the structure of liquid state of matter

PERIODICAL: Ukrayins'kyy fizychnyy zhurnal, v. 7, no. 8, 1962, 806 - 811

TEXT: The author gives the experimental values of compressibilities and shear viscosities of several paraffins, methylsiloxanes and alcohols, obtained by him in collaboration with P.F. Cholpan and I.I. Ivanova. Graphs of temperature dependence of these quantities are given for all substances mentioned. The compressibility was determined from data on density and ultrasound velocity, the latter being measured by I.T. Mikhaylov's interferometer. The empirical formula for the temperature dependence of the compressibility $\beta = \beta_0 \exp [\alpha T]$ is found to agree with experiment better than the expression given by the cell theory. The temperature dependence of viscosity is described by Ya.I. Frenkel's formula $\eta = A \exp$

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Connection of compressibility and ... S/185/62/007/008/001/008
D234/D308

[B/RT]. A table of critical temperatures and the values of P_0, α, B and A is included. It is found that there is a correlation between B and α. Properties of isoviscous substances for each group were studied. The author gives as an example the graph of intensity of scattered X-rays, plotted against the scattering angle, for $(CH_3)_{10}Si_4O_3$ and the solution consisting of 48.73 % of $(CH_3)_8Si_3O_2$ and 51.27 % of $(CH_3)_{12}Si_3O_4$, isoviscous with the former. All experimental points are situated on the same curve, which indicates that the isoviscous substances have the same structure. There is 1 table and 8 figures.

ASSOCIATION: Kiyevskiy universitet (Kiev University)

Card 2/2

[illegible]

[illegible] Ga. [illegible], 1, 1 [illegible] reference: 2 Soviet and 2 non-Soviet. [illegible] bibliography [illegible] Russian publications read as follows: [illegible] Public, Materials, 1[illegible]. [illegible]

[illegible] Moscow State University [illegible]

[illegible] May [illegible]

Card 4/4

BARANOVSKIY, V.Ye.; SHIMANSKIY, Yu.I.; GOLIK, A.Z.

Heat of evaporation of the ternary system ethyl alcohol-butyl alcohol - acetone. Ukr.khim.zhur. 28 no.4:484-486 '62. (MIRA 15:8)

1. Kiyevskiy gosudarstvennyy universitet imeni T.G.Shevchenko.
(Ethyl alcohol) (Butyl alcohol) (Acetone)
(Heat of evaporation)

GOLIK, A.Z.; RYNDICH, N.A.; NUZHNYY, V.M.; GALAGAN, Yu.

Velocity of ultrasound and the compressibility of alcohol - acetone - water solutions. Ukr.khim.zhur. 28 no.4:506-510 '62. (MIRA 15:8)

1. Kiyevskiy gosudarstvennyy universitet imeni T.G.Shevchenko.
(Alcohols) (Acetone) (Ultrasonic waves—Speed)

GOLIK, A.Z.; IVANOVA, I.I.

Molecular structure, density, compressibility, and shearing viscosity of n.paraffins in the liquid state. Zhur.fiz.khim. 36 no.8:1768-1770 Ag '62. (MIRA 15:8)

1. Kiyevskiy gosudarstvennyy universitet.
(Liquids) (Paraffins)

GOLIK, A.Z. [Holyk, O.Z.]; KUCHINKA, M.Yu. [Kuchynka, M.IU]

Temperature-time dependence of the strength of polymers at a constant tension rate. Ukr. fiz. zhur. 8 no.4:479-486 Ap '63. (MIRA 16:8)

1. Kiyevskiy gosudarstvennyy universitet im. Shevchenko.
(Polymers—Testing)

BARANOVSKIY, V.Ye.; COLIK, A.Z.

Latent heat of vaporization of water-alcohol solutions. Ukr. khim. zhur. 29 no.2:137-141 '63. (MIRA 16:5)

1. Kiyevskiy gosudarstvennyy universitet im. T.G. Shevchenko.
(Heat of evaporation) (Alcohols)

GOLIK, A.Z.; ADAMENKO, I.I.; CHOLPAN, P.F.

Effect of molecular interaction on the compressibility and viscosity of liquids. Ukr. fiz. zhur. 9 no.4:412-416 Ap '64. (MIRA 17:8)

1. Kiyevskiy gosudarstvennyy universitet.

L 51442-65 EWT(m)/EPF(c) Pr-4 RM

ACCESSION NR: AP5011070 UR/0185/65/010/004/0443/0449

AUTHOR: Holyk, O. Z. (Golik, A. Z.); Adamenko, I. I.

TITLE: Compressibility and molecular structure of liquids. I. Compressibility of n-paraffins and of their mutual solutions

SOURCE: Ukrayins'kyy fizychnyy zhurnal, v. 10, no. 4, 1965, 443-449

TOPIC TAGS: n-paraffin, molecular structure, compressibility, liquid state, activation energy, viscous flow, intermolecular force

ABSTRACT: The authors investigate the compressibility of liquids having an identical molecular structure and the same type of intermolecular forces (the n-paraffins: n-heptane, n-octane, n-nonane, n-undecane, and n-dodecane). It is shown that the compressibility polytherms of these liquids lie the lower the deeper the potential well on the molecular interaction curve and the larger the activation energy of viscous flow. It is also shown that under certain conditions it is possible to attain coincidence of the polytherms of compressibility of solutions of paraffins and pure substances or other solutions of paraffins of different composi-

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ACCESSION NR: AP5011070

tions (these substances are called iso-compressible). Iso-compressible substances have identical activation energy of viscous flow and identical energy of intermolecular interaction. The adiabatic compressibility polytherms of the investigated normal paraffins are well described by the empirical formula $\beta_{ad} = \beta_0 \exp \alpha T$ in which the constant α is inversely proportional to the viscous-flow activation energy. The dependence of the adiabatic compressibility on the potential of the intermolecular interaction is in good agreement with modern statistical and model theories of liquids. Orig. art. has: 5 figures, 6 formulas, and 4 tables.

ASSOCIATION: Kyyivs'kyy derzhuniversytet im. T. G. Shevchenka [Kiyevskiy gosudarstvennyy universitet im. T. G. Shevchenko] (Kiev State University)

SUBMITTED: 21Nov64 ENCL: 00 SUB CODE: OC, ME

NR REF SOV: 003 OTHER: 003

Card 2/2

ACC NR: AP7004553 SOURCE CODE: UR/0185/66/011/007/0797/0801

AUTHOR: Golik, A. Z.; Cholpan, P. P.; Tarasenko, O. V.
ORG: Kiev State University im. T.H. Shevchenko (Kyyvs'kyy derzhuniversytet)
TITLE: Velocity of ultrasonic vibrations and compressibility of liquid siloxanes
SOURCE: Ukrayins'kyy fizychnyy zhurnal, v. 11, no. 7, 1966, 797-801
TOPIC TAGS: siloxane, temperature dependence, ultrasonic vibration
ABSTRACT: The authors investigated the temperature dependence (within the range of 0 - 200°C) between the velocity of ultrasonic vibrations and the adiabatic compressibility of linear methylsiloxanes - octamethyltrisiloxane, decamethyltetrasiloxane, dodecamethylpentasiloxane, cyclic methylsiloxanes - octamethylcyclotetrasiloxane, decamethylcyclopentasiloxane, and methylphenylsiloxanes - heptamethylphenyltrisiloxane, pentamethyltriphenyltrisiloxane, octamethyldiphenyltetrasiloxane.

It is determined that the temperature dependence of ultrasonic velocity at high temperatures deviates from the linear dependence. The adiabatic compressibility obeys an exponential law over a small range of temperatures only. It is shown that the compressibility of siloxanes decreases with the increase of the intermolecular force potential and the co-ordination number.
Orig. art. has: 4 figures, 3 formulas and 2 tables. [JPRS: 37,330]

SUB CODE: 20,07 / SUBM DATE: 11Dec65 / ORIG REF: 009

Card 1/1

GOLIK, F.K., vrach

Simplified apparatus for the subcutaneous injection of oxygen and solutions. Zdrav.Kazakh. 17 no.9:48-50 '57. (MIRA 12:6)

1. Iz oblastnogo kozhno-venerologicheskogo dispansera Severo-Kazakhstanskoy oblasti Kazakhskoy SSR.
(MEDICAL INSTRUMENTS AND APPARATUS) (INJECTIONS, HYPODERMIC)

65-58-6-4/43

AUTHOR: Golik, G., Senior Inspector-Pilot, DOSAAF Republic Committee of the Ukraine (Kiyev) (Respublikanskiy komitet DOSAAF Ukrainy)

TITLE: Model-airplane Builders Prepared for Sports Combat (Aviamodelisty gotovy k sportivnoy borbe)

PERIODICAL: Kryl'ya rodiny, 1958, No 6, p 2 (USSR)

ABSTRACT: The author states that teams of some 270,000 model airplane builders are now being trained by 4,000 public instructors in DOSAAF primary organizations in the Ukraine. Personalities mentioned include: USSR champion Ye. Kondratenko, N. Demyanenko, Ye. Kuchenov, Yu. Usik, M. Cherkasskiy, V. Sheremet. In June and July (1958), 22,000 model airplane builders will compete at the Spartacus Games.

ASSOCIATION: DOSAAF Republic Committee of the Ukraine

1. Airplanes--Model building

Card 1/1

GOLIK, G.

At gatherings. Kryl. rod. 14 no.2:18 F '63.
(MIRA 16:4)

1. Nachal'nik otdela aviatsionnoy podgotovki respublikanskogo komiteta Dobrovol'nogo obshchestva sodeystviya armii, aviatsii i flotu.

(Ukraine—Parachuting)

ACC NR: AP6[illegible] SOURCE CODE: UR/0079/66/036/009/1636/1639

AUTHOR: Sh[illegible], V. A.; [illegible], I. A.; Lifman, B. Ya.; Derkach, G. I.

ORG: Institute of Organic Chemistry, Academy of Sciences, UkrSSR (Institut organicheskoy khimii Akademii nauk UkrSSR)

TITLE: Monoalkylamides of alkyl methylphosphonates

SOURCE: Zhurnal obshchey khimii, v. 36, no. 9, 1966, 1636-1639

TOPIC TAGS: insecticide, ~~monoalkylamine~~ alkyl ~~methyl phosphonate~~, ORGANIC AMIDE, PHOSPHONATE, PHOSPHONIC ACID

ABSTRACT: In a search for new insecticides, a series of monoalkylamides of alkyl methylphosphonates was obtained by the reaction of methylphosphonic acid chloride with primary amines in the presence of triethylamine in an ether solution at room temperature:

$$CH_3P(O)(OR)Cl \xrightarrow[(C_2H_5)_3N]{R'NH_2} CH_3P(O)(OR)NHR'$$

Composition and properties of the amides are given in the table.

Card 1/4 UDC: 547.26'118

ACC NR: AP6031382 **Table 1.** Monoalkylamides of alkyl methylphosphonates

$CH_3P(O)(OR)NHR'$

R	R'	yield, %	bp (p, mm)	d_4^{20}	n_D^{20}
CH_3	CH_3	*a*, 37	72—73° (0.02)	1.1288	1.4423
CH_3	C_2H_5	*a*, 58	78—79 (0.02)	1.0779	1.4502
CH_3	изо-C_3H_7	*a*, 42	81—83 (0.03)	1.0402	1.4573
CH_3	н.-C_4H_9	*a*, 36	95—96 (0.1)	1.0192	1.4424
C_2H_5	CH_3	*б*, 82 (69)	86—88 (0.5)	1.0835	1.4590
C_2H_5	C_2H_5	*б*, 72	91—93 (0.4)	1.0482	1.4372
C_2H_5	изо-C_3H_7	*б*, 78 (62)	66—67 (0.03)	0.9975	1.4317
C_2H_5	н.-C_4H_9**	*a*, 54 (11)	100—101 (0.1)	0.9971	1.4475
изо-C_3H_7	CH_3	*б*, 81 (58)	73—75 (0.06)	1.0372	[illegible]
изо-C_3H_7	C_2H_5	*б*, 79	69—71 (0.02)	1.0103	[illegible]
изо-C_3H_7	изо-C_3H_7	*б*, 63	85—87 (0.07)	0.9863	[illegible]
изо-C_3H_7	н.-C_4H_9	*a*, 54 (13)	138—139 (11)	0.9712	1.4376

Card 2/4

ACC NR: AP

Found	Calc.	Found, %	Formula	Calculated
28.89	29.13	N 11.43	$C_3H_{10}NO_2P$	N 11.56
33.54	33.65	CH_3O 22.53	$C_4H_{12}NO_2P$	CH_3O 22.53
38.12	38.36	CH_3O 20.65	$C_5H_{14}NO_2P$	CH_3O 20.53
42.92	42.98	CH_3O 18.74	$C_6H_{16}NO_2P$	CH_3O 18.75
33.32	33.65	N 10.21	$C_4H_{12}NO_2P$	N 10.22
37.92	38.36	N 9.22; P 20.53	$C_5H_{14}NO_2P$	N 9.27; P 20.40
43.08	42.98	P 18.59	$C_6H_{16}NO_2P$	P 18.75
47.33	47.60	N 7.58	$C_7H_{18}NO_2P$	N 7.51
38.03	38.36	N 9.34	$C_5H_{14}NO_2P$	N 9.27
42.53	42.98	N 8.43	$C_6H_{16}NO_2P$	N 8.[illegible]3
47.11	47.60	N 7.99; P 17.34	$C_7H_{18}NO_2P$	N 8.01; P 17.28
52.13	52.22	N 7.28; P 16.04	$C_8H_{20}NO_2P$	N 7.25; P 16.05

Card 3/4

ACC NR: AP6031382

These amides have strong insecticidal properties but are very toxic to domestic animals. Monoalkylamides of alkyl methyphosphonates react with tert-butyl hypochlorite to form N-chloro-N-alkylamides of alkyl methylphosphonates. The reaction takes place in chloroform at 20—30°C. [WA-50; CBE No. 12]

SUB CODE: 06,07/ SUBM DATE: 17Jul65/ ORIG REF: 003/ OTH REF: 014/

Card 4/4

KHODCHENKO, L.P., inzhener; GOLIK, G.I., inzhener.

Standard metallic edge fittings for construction yards.
Shakht.stroi. no.4:25-27 Ap '57. (MLRA 10:7)
(Building materials industry--Equipment and supplies)

GOLIX, G.Kh., student IV kursa; VEDOLETS, I.P., student V kursa

Professor Petr Ivanovich Shatilov, founder of the original Russian school of therapeutics. Klin.med. 34 no.8:87-91 Ag '56. (MIRA 12:8)

1. Iz kafedry propedevtiki vnutrennikh bolezney (zav. - zasluzhennyy deyatel' nauki prof. V.M.Kogan- Yasnyy) lechebnogo fakul'teta Khar'kovskogo meditsinskogo instituta i 26-y klinicheskoy bol'nitsy (glavnyy vrach M.P.Goreninchenko).

(BIOGRAPHIES
Shatilov, Petr I.)

[illegible]

[illegible] Levy of [illegible] Trans. [illegible] crain rep.
45 no.9:[illegible]-84, S '58. (MIRA 11:9)

1. [illegible] Novosibirskoye [illegible] (Far East).
(Crops and Freightage)

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APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000515720010-0"

WOLIK, K.N. [Holyk, K.N.]

Diurnal and seasonal dynamics of the intensity of photosynthesis in the sweet cherry, cherry, plum and apricot. Ukr. bot. zhur. 19 no.3: 20-27 '62. (MIRA 15:7)

1. Institut botaniki AN UkSSR, otdel fotosintesa.
(Photosynthesis) (Fruit trees)

GOLIK, [illegible] [holy], [illegible]

Intensity of photosynthesis and transpiration in the leaves of different sides of the crown in the sweet cherry, sour cherry, plum and morello cherry on the light. Ukr. bot. zhur. [illegible] (MIRA [illegible])

1. Instituti fiziologii rastenii [illegible], [illegible] fotosintezu.

GOLIK, K.N. [Holyk, K.M.]

Effect of shade on the intensity of photosynthesis and transpiration in the representatives of Prunordeae. Ukr. bot. zhur. 21 no.1:18-24 '64. (MIRA 17:5)

1. Otdel fotosinteza Instituta botaniki AN UkrSSR.

Dependence of the average values characterizing elastic scattering of electrons in gases on the effective cross section for transmission of momentum

Jul 49

USSR/Physics
Electron Microscope
Arcs, Mercury

"Electronic Optical Phenomena in the Plasma of a Mercury Arc Under Low Pressure," L. I. Golik, G. V. Spivak, Phys Faculty, Moscow State U imeni M. V. Lomonosov, 9 pp

"Zhur Tekh Fiz" Vol XIX, No 7

Shows that in the field of a magnetic lens acting on a stationary plasma, contractions of two types develop: (1) diffusive-plasmatic, and (2) electronic optic. Second case develops for a rapid change in potential and an artificial contraction in plasma. Measured distribution of charges along radius of ray and clarified influence of second magnetic lens capturing ray. Magnitude of discharge current influences focusing, as it does all effects of the magnetic field in the plasma. Decrease in contraction with increase in current is due to increase in proportion of speed of chaotic motion of the electrons in comparison with direction. Submitted 29 Jun 48.

51/49T59

GOLIK, L. I.

USSR/Physics - Plasma Oct 53

"Electron Optical Phenomena in Focussing and Stationary Plasma in Mercury Vapors," L.I. Golik (deceased) and G.V. Spivak, Chair of Electron Optics

Vest Mos Univ, Ser Fizikomat i Yest Nauk, No 7, pp 117-123

In their previous works (see Zhur Eksp Teor Fiz, Vol 23, 1953) at their lab the authors established the presence of the phenomena of plasma focussing, which occurs under the action of external and internal electrical and magnetic fields. Their purpose here is to study the phenomena of contraction

273T97

(necking) of stationary plasma toward the axis of symmetry in a strong and concentrated external magnetic field.

SMIRK, L. I., MOSHCHEVSKIY, I. I., and SHTERNSHLEYBER, E. I.

"Application of a Differential Thermo-couple for the Investigation of Mass Transfer at Drying Silicate Materials."

Report submitted for the Conference on Heat and Mass Transfer, Minsk, USSR, June 1961.

2300

26.2421

AUTHORS:

TITLE:

PERIODICAL:

TEXT:

X

[illegible], M., [illegible], [illegible], [illegible], [illegible].

[illegible] more precisely the mechanical damage of [illegible].
Mek.-elev. prom. [illegible] no.10:15-16 [illegible] '61. (MIRA [illegible])

1. [illegible] rybolovnyy [illegible] rybnoy promyshlennosti.

GOLIK, M. G.

"Scientific Principles Underlying the Storage of Ear and Shelled Corn and Their Practical Application." Dr Agr Sci, Khar'kov Agricultural Inst, Moscow, 1953. (RZhBiol, No 6, Nov 54)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (11)

SO: Sum. No.521, 2 Jun 55

Chemical Abst.
Vol. 48 No. 9
Apr. 25, 1954
Fats, Fatty Oils, Waxes, and
Detergents

[illegible] rapidly method for the [illegible] of sunflower (seeds). [illegible] Chem. 13, No. 11. [illegible] with oil during storage with [illegible] content of the seeds and the [illegible] part of cotyledons, [illegible]
Vitalnir N. Krukovsky

GOLIK M.G.

VORONTSOV, O.S.; GOLIK, M.G.; DELIDOVICH, V.N.; KLEYEV, I.A.; KOZ'-MINA, N.P., doktor biologicheskikh nauk, professor; SOSEDOV, N.I. FESTA, N.Ya.; CHUKHAR'KO, Z.T.; GIL'MAN, D.Ya., redaktor; LA-BUS, G.A., tekhnicheskiy redaktor.

[Grain storage; management and equipment] Organizatsiia i tekhnika khraneniia zerna. Moskva, Izd-vo tekhn. i ekonomicheskoi lit-ry. 1954. 358 p. [Microfilm] (MLRA 7:10)

(Grain--Storage)

Golik, M.G.

USSR

✓ Accumulation of fat and its distribution in the corn grain. M. G. Golik. *Biokhim. Zerna, Akad. Nauk S.S.S.R.* [redacted] (1953). —In the course of vegetation both grain contains much fat, reaching 1.87% at ripeness. Embryo tissues contain more fat than do other parts of the grain. The embryo also bears the greater proportion of enzyme systems, which are of importance in storability of corn. Thus the state of the embryo is more important as a storability factor in corn than in other grain. G. M. K...

BAUM, A., kandidat tekhnicheskikh nauk; GOLIK, M., kandidat sel'skokhozyaystvennykh nauk.

Transference of moisture in stored grain. Muk.-elev.prom. 20 no.3:3-6 Mr '54. (MLRA 7:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut zerna i produktov ego pererabotki.
(Grain--Storage)

GOLIK, M.G.

Changes in the enzymic activity of ripening corn seeds. M. G. Golik. *Trudy Vsesoyuz Nauch Issledovatel. Inst. Zerna* 1954, No. 27, 66-72; *Referat Zhur. Khim., Biol. Khim.* 1954, No. 11792.—The activity of dehydrases, α- and β-amylase, and of lipase in the corn seeds during the period of milk formation is high. As the seeds ripen the activity of such enzymes gradually recedes until at the stage of complete ripening enzymic activity is not detected. It is suggested that the possible persistence of amylase may be one of the factors responsible for the easy spoilage of corn harvested before its full maturity. B. S. Levina.

GOLIK, M.G.

Golik, M. G.: Fiziologo-biokhimicheskie osnovy khranenitya kukuruzy (Physiological-Biochemical Bases for the Storage of Corn). Moscow: Izdatel. Akad. Nauk S.S.S.R. 1955. 223 pp.

GOLIK, M., doktor sel'skokhozyaystvennykh nauk.

Particular aspects of corn storage. Muk.-elev.prom. 21 no.10:4-7 O '55. (MLRA 9:1)

1.Vysshaya zagotovitel'naya shkola.
(Corn (Maize)--Storage)

GOLIK, Mikhail Grigor'yevich, doktor sel'skokhozyaystvennykh nauk, professor; KRETOVICH, V.L., professor, doktor biologicheskikh nauk, redaktor; GEL'MAN, D.Ya., redaktor; GOLUBKOVA, L.A., tekhnicheskiy redaktor

[Storage of corn: scientific principles] Khranenie kukuruzy; nauchnye osnovy. Pod red. V.L.Kretovicha. Moskva, Izd-vo tekhn. i ekon. lit-ry po voprosam mukomol'no-krupianoi, kombikormovoi promyshl. i elevatorno-skladskogo khoziaistva Khleboizdat, 1956. 115 p.
(Corn (Maize)--Storage) (MLRA 10:3)

GOLIK, M. G.

✓ **Dehydrogenases of developing grain of maize.** M. G. Golik. *Biokhim. Zerna, Sbornik* 1956, No. 3, 166-81.—During maturation of maize grain there is a gradual decrease in the rate of respiration of the grain. Along with this decrease in rate of respiration there was observed a decrease in the activity of dehydrogenases, indicating that the lowering of the respiratory gas metabolism is connected with the lowering of the activity of the oxidation-reduction enzymic systems, mainly of dehydrogenases. L. A. Sklar

GOLIK, M., doktor sel'skokhozyaystvennykh nauk, prof.; RYAZANTSEV, P.

Effectiveness of drying ear seed corn with hot air in Krasnodar Territory. Mek.-elev. prom. 24 no.8:14-16 Ag '58. (MIRA 11:10)

1. Nachal'nik Krasnodarskogo upravleniya khleboproduktov (for Ryazantsev).
(Krasnodar Territory--Corn (Maize)--Drying)

GOLIK, Mikhail Grigor'yevich, doktor sel'khoz. nauk, prof. Primimal uchastiye KREYMERMAN, G.I., kand. tekhn. nauk; KRETOVICH, V.L., doktor biolog. nauk, prof., otv. red.; GLAZUNOV, Ye.A., red. izd-va; SHAFRANSKAYA, M.Z., red. izd-va; POLYAKOVA, T.V., tekhn. red.

[Scientific principles in the storage and processing of corn] Nauchnye osnovy khraneniia i obrabotki kukuruzy. Moskva, Izd-vo Akad. nauk SSSR, 1961. 347 p. (MIRA 14:10)
(Corn (Maize))--Storage)

GOLIK, M., doktor sel'skokhozyaystvennykh nauk; PEKTA, N., kand.tekhn.nauk

Evaluating the germinative capacity of corn. Tek.-elev. prom. 27 no.8:25-27 Ag '61. (MIRA 14:7)

1. Vsesoyuznyy zaochnyy institut pishchevoy promyshlennosti.
(Corn (Maize)
(Germination)

GOLIK, M., professor-doktor

"Provisional r commendations on the receiving, disposing, and storing of pulse crop seeds (peas, forage beans, and lupine)." Reviewed by M. Golik. Muk.-elev. prom. 28 no.10:32 and p. 3 of cover O '62. (MIRA 15:1)

1. Vsesoyuznyy zaochnyy institut pishchevoy promyshlennosti.
(Legumes) (Seeds--Storage)